Apprenticeship and Industry Training

Painter and Decorator

Apprenticeship Course Outline

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Apprenticeship and Industry Training

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Painter and Decorator
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Apprenticeship

Apprenticeship is post-secondary education with a difference. Apprenticeship begins with finding an employer. Employers hire apprentices, pay their wages and provide on-the-job training and work experience. Approximately 80 per cent of an apprentice's time is spent on the job under the supervision of a certified journeyperson or qualified tradesperson. The other 20 per cent involves technical training provided at, or through, a post-secondary institution – usually a college or technical institute.

To become certified journeypersons, apprentices must learn theory and skills, and they must pass examinations. Requirements for certification—including the content and delivery of technical training—are developed and updated by the Alberta Apprenticeship and Industry Training Board on the recommendation of Painter and Decorator Provincial Apprenticeship Committee.

The graduate of the Painter and Decorator apprenticeship program is a certified journeyperson who will be able to:

- apply coatings by brush, roller and spray to surfaces of wood, metal, brick, concrete, plaster, stucco and stone for decorative and protective purposes. This occurs in residential, commercial, institutional and industrial settings.
- apply wall coverings to surfaces in residential and commercial buildings.
- perform surface preparation on new and existing surfaces.
- be competent and proficient in the safe use of hand tools, power equipment and precision-built machinery.
- be familiar with and able to co-operate in the work of allied trades engaged in construction, building maintenance and home decoration.
- perform assigned tasks in accordance with safety, quality, environmental and production standards required by industry.
- calculate areas and relate these calculations to required material.

Apprenticeship and Industry Training System

Industry-Driven

Alberta's apprenticeship and industry training system is an industry-driven system that ensures a highly skilled, internationally competitive workforce in more than 50 designated trades and occupations. This workforce supports the economic progress of Alberta and its competitive role in the global market. Industry (employers and employees) establishes training and certification standards and provides direction to the system through an industry committee network and the Alberta Apprenticeship and Industry Training Board. The Alberta government provides the legislative framework and administrative support for the apprenticeship and industry training system.

Alberta Apprenticeship and Industry Training Board

The Alberta Apprenticeship and Industry Training Board provides a leadership role in developing Alberta's highly skilled and trained workforce. The board's primary responsibility is to establish the standards and requirements for training and certification in programs under the Apprenticeship and Industry Training Act. The board also provides advice to the Minister of Advanced Education and Technology on the needs of Alberta's labour market for skilled and trained workers, and the designation of trades and occupations.

The thirteen-member board consists of a chair, eight members representing trades and four members representing other industries. There are equal numbers of employer and employee representatives.

Industry Committee Network

Alberta's apprenticeship and industry training system relies on a network of industry committees, including local and provincial apprenticeship committees in the designated trades, and occupational committees in the designated occupations. The network also includes other committees such as provisional committees that are established before the designation of a new trade or occupation comes into effect. All trade committees are composed of equal numbers of employer and employee representatives. The industry committee network is the foundation of Alberta's apprenticeship and industry training system.

Local Apprenticeship Committees (LAC)

Wherever there is activity in a trade, the board can set up a local apprenticeship committee. The board appoints equal numbers of employee and employer representatives for terms of up to three years. The committee appoints a member as presiding officer. Local apprenticeship committees:

- monitor apprenticeship programs and the progress of apprentices in their trade, at the local level
- make recommendations to their trade's provincial apprenticeship committee (PAC) about apprenticeship and certification in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- make recommendations to the board about the appointment of members to their trade's PAC
- help settle certain kinds of disagreements between apprentices and their employers
- carry out functions assigned by their trade's PAC or the board

Provincial Apprenticeship Committees (PAC)

The board establishes a provincial apprenticeship committee for each trade. It appoints an equal number of employer and employee representatives, and, on the PAC's recommendation, a presiding officer - each for a maximum of two terms of up to three years. Most PACs have nine members but can have as many as twenty-one. Provincial apprenticeship committees:

- Make recommendations to the board about:
  - standards and requirements for training and certification in their trade
  - courses and examinations in their trade
  - apprenticeship and certification
  - designation of trades and occupations
  - regulations and orders under the Apprenticeship and Industry Training Act
- monitor the activities of local apprenticeship committees in their trade
- determine whether training of various kinds is equivalent to training provided in an apprenticeship program in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- consult with other committees under the Apprenticeship and Industry Training Act about apprenticeship programs, training and certification and facilitate cooperation between different trades and occupations
- consult with organizations, associations and people who have an interest in their trade and with employers and employees in their trade
- may participate in resolving certain disagreements between employers and employees
- carry out functions assigned by the board

Painter and Decorator PAC Members at the time of publication.

Mr. Ken E. Carriere	Edmonton	Presiding Officer
Mr. Harald Traweger	Red Deer	Employer
Mr. Dustin L. Friesen	Edmonton	Employee
Mr. Vincent E. Massey	Calgary	Employee
Mr. David M. West	Edmonton	Employee

Alberta Government

Alberta Advanced Education and Technology works with industry, employer and employee organizations and technical training providers to:

- facilitate industry's development and maintenance of training and certification standards
- provide registration and counselling services to apprentices and employers
- coordinate technical training in collaboration with training providers
- certify apprentices and others who meet industry standards

Technical Institutes and Colleges

The technical institutes and colleges are key participants in Alberta's apprenticeship and industry training system. They work with the board, industry committees and Alberta Advanced Education and Technology to enhance access and responsiveness to industry needs through the delivery of the technical training component of apprenticeship programs. They develop lesson plans from the course outlines established by industry and provide technical training to apprentices.

Apprenticeship Safety

Safe working procedures and conditions, incident/injury prevention, and the preservation of health are of primary importance in apprenticeship programs in Alberta. These responsibilities are shared and require the joint efforts of government, employers, employees, apprentices and the public. Therefore, it is imperative that all parties are aware of circumstances that may lead to injury or harm.

Safe learning experiences and healthy environments can be created by controlling the variables and behaviours that may contribute to or cause an incident or injury. By practicing a safe and healthy attitude, everyone can enjoy the benefit of an incident and injury free environment.

Alberta Apprenticeship and Industry Training Board Safety Policy

The Alberta Apprenticeship and Industry Training Board fully supports safe learning and working environments and encourages the teaching of proper safety procedures both within trade specific training and in the workplace.

Trade specific safety training is an integral component of technical training, while ongoing or general non-trade specific safety training remains the responsibility of the employer and the employee as required under workplace health and safety legislation.

Workplace Responsibilities

The employer is responsible for:

- training employees and apprentices in the safe use and operation of equipment
- providing and maintaining safety equipment, protective devices and clothing
- enforcing safe working procedures
- providing safeguards for machinery, equipment and tools
- observing all accident prevention regulations
- The employee and apprentice are responsible for:
- working in accordance with the safety regulations pertaining to the job environment
- working in such a way as not to endanger themselves, fellow employees or apprentices

Workplace Health and Safety

A tradesperson is often exposed to more hazards than any other person in the work force and therefore should be familiar with and apply the Occupational Health and Safety Act, Regulations and Code when dealing with personal safety and the special safety rules that apply to all daily tasks.

Workplace Health and Safety (Alberta Employment, Immigration and Industry) conducts periodic inspections of workplaces to ensure that safety regulations for industry are being observed.

Additional information is available at www.worksafely.org

Technical Training

Apprenticeship technical training is delivered by the technical institutes and many colleges in the public post-secondary system throughout Alberta. The colleges and institutes are committed to delivering the technical training component of Alberta apprenticeship programs in a safe, efficient and effective manner. All training providers place great emphasis on safe technical practices that complement safe workplace practices and help to develop a skilled, safe workforce.

The following institutions deliver Painter and Decorator apprenticeship technical training:

Northern Alberta Institute of Technology
Southern Alberta Institute of Technology

Procedures for Recommending Revisions to the Course Outline

Advanced Education and Technology has prepared this course outline in partnership with the Painter and Decorator> Provincial Apprenticeship Committee.

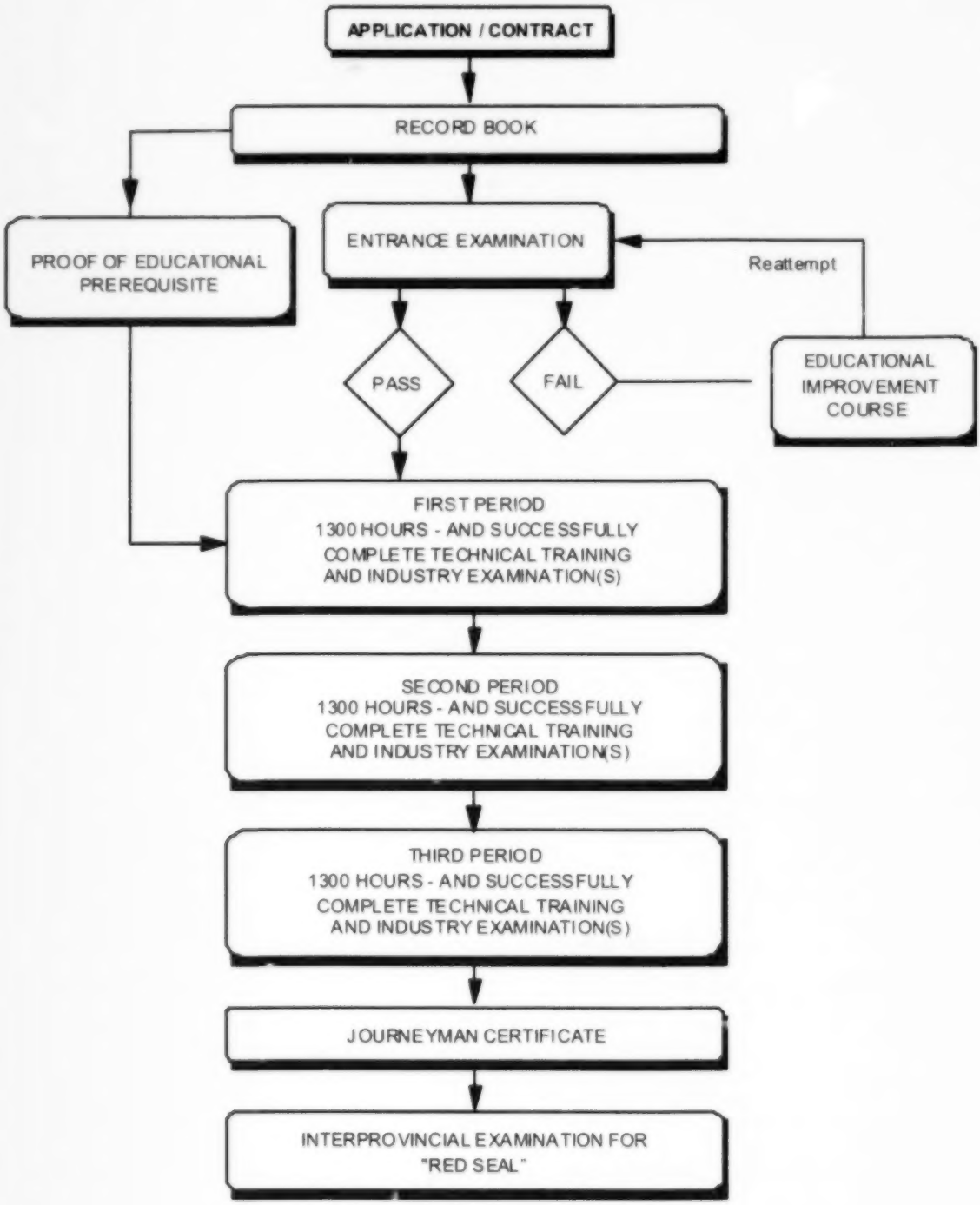
This course outline was approved on February 6, 2009 the Alberta Apprenticeship and Industry Training Board on a recommendation from the Provincial Apprenticeship Committee. The valuable input provided by representatives of industry and the institutions that provide the technical training is acknowledged.

Any concerned individual or group in the province of Alberta may make recommendations for change by writing to:

Painter and Decorator Provincial Apprenticeship Committee
c/o Industry Programs and Standards
Apprenticeship and Industry Training
Advanced Education and Technology
10th floor, Commerce Place
10155 102 Street NW
Edmonton AB T5J 4L5

It is requested that recommendations for change refer to specific areas and state references used. Recommendations for change will be placed on the agenda for regular meetings of the Painter and Decorator Provincial Apprenticeship Committee.

Apprenticeship Route toward Certification



Painter and Decorator Training Profile
FIRST PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)

		A	B	C	D
SECTION ONE	**GENERAL PAINTING** **30 HOURS**	Introduction to Painting and Decorating 2 Hours	Health and Safety 8 Hours	Material Selection 16 Hours	Surface Analysis and Remedies 4 Hours
SECTION TWO	**SURFACE PREPARATION** **64 HOURS**	Surface Preparation Theory 20 Hours	Surface Preparation Procedures 37 Hours	Drywall Finishing Theory 3 Hours	Drywall Finishing Procedures 4 Hours
SECTION THREE	**COLOUR** **23 HOURS**	Colour Theory 12 Hours	Colour Mixing 11 Hours		
SECTION FOUR	**MANUAL APPLICATION TOOLS** **45 HOURS**	Manual Application Theory 15 Hours	Manual Application Procedures 30 Hours		
SECTION FIVE	**CONVENTIONAL AND AIRLESS SPRAYING** **38 HOURS**	Conventional and Airless Spraying Theory 15 Hours	Conventional and Airless Spraying Procedures 23 Hours		
SECTION SIX	**BASIC MATHEMATICS AND DRAWING INTERPRETATION** **40 HOURS**	Trade Mathematics 35 Hours	Drawing 5 Hours		

SECOND PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)

		A	B
SECTION ONE	**DECORATIVE FINISHES** **35 HOURS**	Decorative Finishes Theory 15 Hours	Decorative Finishes Procedures 20 Hours
SECTION TWO	**WOOD FINISHING** **45 HOURS**	Wood Finishing Theory 20 Hours	Wood Finishing Procedures 25 Hours

SECTION THREE

RESIDENTIAL WALLCOVERING
50 HOURS

A	B
Residential Wallcovering Theory 20 Hours	Residential Wallcovering Procedures 30 Hours

SECTION FOUR

COLOURANT
20 HOURS

A	B
Colourant Theory 10 Hours	Colourant Mixing 10 Hours

SECTION FIVE

AIR ASSISTED AIRLESS SPRAYING AND HOT SPRAYING
50 HOURS

A	B	C
Air Assisted Airless Spraying Theory 10 Hours	Air Assisted Airless Spraying Procedures 20 Hours	Hot Spray and Spray Booths Theory 10 Hours

D
Hot Spray and Spray Booths Operation 10 Hours

SECTION SIX

INTERMEDIATE MATHEMATICS AND DRAWING INTERPRETATION
40 HOURS

A	B
Area Measurements 20 Hours	Drawings and Specifications 20 Hours

THIRD PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)

SECTION ONE

INDUSTRIAL PAINTING
89 HOURS

A	B	C
Industrial Health and Safety 4 Hours	Industrial Surface Preparation 35 Hours	Industrial Coatings 25 Hours

D
Industrial Spraying 25 Hours

SECTION TWO

COMMERCIAL WALLCOVERING
28 HOURS

A	B
Advanced Wallcovering Theory 8 Hours	Advanced Wallcovering Procedures 20 Hours

SECTION THREE

SPECIALTY FINISHES
64 HOURS

A	B	C
Specialty Finishes Theory 8 Hours	Specialty Finishes Applications 18 Hours	Colour Planning 12 Hours

D	E
Advanced Wood Finishing Theory 5 Hours	Advanced Wood Finishing Procedures 21 Hours

SECTION FOUR

ADVANCED CALCULATIONS AND FINAL PERIOD FUNDAMENTALS

59 HOURS

A	B	C
Mathematics 20 Hours	Blueprint Interpretation 20Hours	Workplace Coaching Skills 5 Hours

D	E
Advisory Network 2 Hours	Interprovincial Standards 12 Hours

NOTE: The hours stated are for guidance and should be adhered to as closely as possible. However, adjustments must be made for rate of apprentice learning, statutory holidays, registration and examinations for the training establishment and Apprenticeship and Industry Training

FIRST PERIOD TECHNICAL TRAINING
PAINTER AND DECORATOR TRADE
COURSE OUTLINE

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE: ..... GENERAL PAINTING ..... 30 HOURS

A. Introduction to Painting and Decorating ..... 2 Hours

Outcome: ***Describe the role of apprenticeship within the painting and decorating industry.***

1. Discuss the obligations and responsibilities of apprentices on the job and in technical training.
2. Outline the scope of the trade.
3. Identify and demonstrate the use of proper construction terminology and building components.

B. Health and Safety ..... 8 Hours

Outcome: ***Demonstrate safe work practices at all times.***

1. Identify safety regulations as they apply to the trade.
2. Describe requirements related to equipment and their safety measures.
3. Describe what WHMIS is and its elements.
4. Detail the effects of LEEDS on the painting and decorating trade.
5. Discuss potential environmental hazards such as asbestos, lead and mold.

C. Material Selection ..... 16 Hours

Outcome: ***Describe the components of conventional coatings and their performance characteristics.***

1. Identify types of coatings and their primary function.
2. Identify prime, extender, colour pigments and their function.
3. Identify natural and synthetic resins and binders and their function.
4. Identify driers, catalysts and their function.
5. Identify solvents, diluents and their function.
6. Interpret product data sheets.

D. Surface Analysis and Remedies ..... 4 Hours

Outcome: ***Describe substrates and their characteristics.***

1. Identify the substrates commonly used in the construction industry.
2. Describe types of common surface defects and coating failure.
3. State the cause of each common defect and coating failure.
4. Outline a course of remedial action for each common defect and coating failure.

SECTION TWO ..... SURFACE PREPARATION ..... 64 HOURS

A. Surface Preparation Theory ..... 20 Hours

Outcome: ***Develop a detailed analysis of surface preparation requirements for each type of substrate.***

1. Explain the functions of the tools used in the surface preparation process.
2. Select from the correct natural and/or synthetic abrasives for each surface preparation process.
3. Describe the removal of coatings and/or wall coverings from various substrates.
4. Describe the types and uses for patching and stopping compounds.
5. Describe the surface preparation process and the finishing sequence for new and previously coated drywall surfaces.
6. Describe the surface preparation process and the finishing sequence for new and previously coated plaster surfaces.
7. Describe the surface preparation process and the finishing sequence for new and previously coated masonry surfaces.
8. Describe the surface preparation process and the finishing sequence for new and previously coated wood surfaces.
9. Describe the surface preparation process and the finishing sequence for new and previously coated ferrous and non-ferrous metal surfaces.

B. Surface Preparation Procedures ..... 37 Hours

Outcome: ***Relate surface preparation theory to practical application.***

1. Prepare previously painted surfaces for the application of coatings.
2. Prepare unpainted surfaces for the application of coatings.
3. Repair surface defects.
4. Demonstrate the ability to remove coatings and wall coverings from various substrates.

C. Drywall Finishing Theory ..... 3 Hours

Outcome: ***Explain drywall finishing procedures.***

1. Describe tools required for drywall finishing.
2. Describe materials and procedures used for drywall finishing.

D. Drywall Finishing Procedures ..... 4 Hours

Outcome: ***Apply drywall finishing theory to practical applications.***

1. Demonstrate the ability to do basic drywall finishing.

SECTION THREE: ..... COLOUR ..... 23 HOURS

A. Colour Theory ..... 12 Hours

Outcome: ***Establish a fundamental understanding of colour theories as they relate to painting and decorating.***

1. Define colour terms.
2. Explain the additive theory of colour.

3. Explain the spectrum theory of colour.
4. Explain the subtractive theory of colour.

B. Colour Mixing ..... 11 Hours

Outcome: ***Relate colour theory to practical applications.***

1. Mix colours to match wet and dry colour samples.
2. Construct colour charts.

SECTION FOUR: .....MANUAL APPLICATION TOOLS..... 45 HOURS

A. Manual Application Theory ..... 15 Hours

Outcome: ***Describe brushing, rolling and alternate application methods.***

1. Describe types, uses and components of paintbrushes.
2. Describe types, uses and components of rollers.
3. Describe types of alternate application tools and methods.

B. Manual Application Procedures ..... 30 Hours

Outcome: ***Relate brushing and rolling theory to practical application.***

1. Demonstrate the application of coatings using brushes to various substrates.
2. Demonstrate the application of coatings using rollers to various substrates.
3. Demonstrate the application of coatings using alternate application tools to various substrates.

SECTION FIVE:.....CONVENTIONAL AND AIRLESS SPRAYING..... 38 HOURS

A. Conventional and Airless Spraying..... 15 Hours

Outcome: ***Describe the operation of conventional and airless spray equipment.***

1. Describe the operation of airless spray equipment.
2. Describe the operation of conventional spray equipment.
3. Identify the components of an airless system.
4. Identify the components of a conventional spray system.
5. Outline maintenance requirements for airless spray equipment.
6. Outline maintenance requirements for conventional spray equipment.

B. Conventional and Airless Spraying Procedures..... 23 Hours

Outcome: ***Relate conventional and airless spraying theory to practical application.***

1. Perform start up and shut down procedures for conventional spray equipment.
2. Perform start up and shut down procedures for airless spray equipment.
3. Demonstrate proper spraying technique for conventional spray equipment.
4. Demonstrate proper spraying technique for airless spray equipment.
5. Perform maintenance and troubleshooting on conventional spray equipment.
6. Perform maintenance and troubleshooting on airless spray equipment.

SECTION SIX ..... BASIC MATHEMATICS AND DRAWING INTERPRETATION ..... 40 HOURS

A. Trade Mathematics ..... 35 Hours

Outcome: ***Solve trade related math problems in the Imperial and Metric systems.***

1. Utilize basic math equations.
2. Determine the perimeter of geometric shapes.
3. Calculate the surface area of geometric shapes.
4. Estimate material quantities for surfaces.

B. Drawings ..... 5 Hours

Outcome: ***Interpret basic drawing components.***

1. Perform calculations derived from basic line drawings.

SECOND PERIOD TECHNICAL TRAINING
PAINTER AND DECORATOR TRADE
COURSE OUTLINE

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE: DECORATIVE FINISHES ..... 35 HOURS

A. Decorative Finishes Theory ..... 15 Hours

Outcome: ***Describe the procedures for completing basic decorative finishes.***

1. Describe preparation required for decorative finishing.
2. Identify specialized tools.
3. Explain the process for completing individual decorative finishes, such as:
    a) glazing
    b) multi colour spraying
    c) faux finish rollers
    d) stippling
    e) stenciling
    f) texture paints
    g) striping and lining

B. Decorative Finish Procedures ..... 20 Hours

Outcome: ***Create samples based on decorative finishing theory.***

1. Prepare a surface for decorative finishes.
2. Apply decorative finishes to prepared surfaces.
3. Clean and store tools used for surface preparation and application.

SECTION TWO: WOOD FINISHING ..... 45 HOURS

A. Wood Finishing Theory ..... 20 Hours

Outcome: ***Describe the wood finishing process.***

1. Identify common soft and hard woods and describe their physical properties.
2. Describe surface preparation procedures for wood surfaces.
3. Describe finishing procedures for wood surfaces.
4. Identify wood finishing materials.

B. Wood Finishing Procedures ..... 25 Hours

Outcome: ***Create samples based on wood finishing theory.***

1. Prepare an unfinished wood surface for finishing.
2. Apply finishes to prepared wood surfaces.
3. Clean and store tools used for surface preparation and application.

SECTION THREE: ..... RESIDENTIAL WALLCOVERING ..... 50 HOURS

A. Residential Wallcovering Theory ..... 20 Hours

Outcome: ***Describe the wallcovering application process.***

1. Describe surface preparation procedures.
2. Discuss the types, patterns and dimensions of wallcoverings.
3. Discuss physical properties of adhesives.
4. List tools used for wallcovering application.
5. Describe wallcovering application procedures

B. Residential Wallcovering Procedures ..... 30 Hours

Outcome: ***Create samples based on wallcovering theory.***

1. Prepare surfaces for the application of wallcovering.
2. Apply wallcovering to ceilings and walls.
3. Clean, maintain and store wallcovering tools.

SECTION FOUR ..... COLOURANT ..... 20 HOURS

A. Colourant Theory ..... 10 Hours

Outcome: ***Define colourants and their uses.***

1. Discuss colour tint systems.
2. Explain the physical characteristics of colourants.
3. Compare the toptone and undertone of colourants.

B. Colourant Mixing..... 10 Hours

Outcome: ***Create samples based on colourant theory.***

1. Mix stain samples to match existing samples.
2. Construct a chart with colourants to compare toptones and undertones.
3. Use colourants to match putty to stained wood samples.

SECTION FIVE ..... AIR ASSISTED AIRLESS SPRAYING AND HOT SPRAYING ..... 50 HOURS

A. Air Assisted Airless Spraying Theory ..... 10 Hours

Outcome: ***Describe the principles of air assisted airless spraying.***

1. Describe the operation of air assisted airless spray equipment.
2. Identify the components of an air assisted airless system.
3. Describe the use of air assisted airless spray equipment.
4. Outline maintenance requirements for air assisted airless spray equipment.

B. Air Assisted Airless Spraying Procedures ..... 20 Hours

Outcome: ***Operate and maintain air assisted airless spray systems.***

1. Perform start up and shut down procedures for air assisted airless spray equipment.
2. Demonstrate proper spraying technique for air assisted airless spray equipment.
3. Perform maintenance and troubleshooting on air assisted airless spray equipment.

C. Hot Spray and Spray Booth Theory ..... 10 Hours

Outcome: ***Describe the principles of hot spray and spray booths.***

1. Describe the operation and maintenance of spray booths.
2. Describe the operation and maintenance of hot spray.

D. Hot Spray and Spray Booths Operation ..... 10 Hours

Outcome: ***Relate the principles of hot spray and spray booth to practical application.***

1. Operate and maintain a spray booth.
2. Operate and maintain hot spray.

SECTION SIX .....INTERMEDIATE MATHEMATICS AND DRAWING INTERPRETATION ..... 40 HOURS

A. Area Measurements ..... 20 Hours

Outcome: ***Perform perimeter and area calculations on complex geometric shapes.***

1. Calculate the perimeter of complex geometric shapes.
2. Calculate the surface area of complex geometric shapes.
3. Complete wallcovering estimates using area and strip methods.

B. Drawings and Specifications ..... 20 Hours

Outcome: ***Interpret information found in schedules and blueprints.***

1. Identify line types, symbols and notations used on blueprints.
2. Relate the information from schedules to blueprints.
3. Complete quantity take-offs from blueprints and schedules.

THIRD PERIOD TECHNICAL TRAINING
PAINTER AND DECORATOR TRADE
COURSE OUTLINE

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE: ..... INDUSTRIAL PAINTING ..... 89 HOURS

A. Industrial Health and Safety ..... 4 Hours

Outcome: ***Discuss safety related issues.***

1. Apply general Occupational Health and Safety Regulations to industrial painting.
2. Discuss respiratory protection.
3. Discuss confined space entry regulations.
4. Discuss the Environmental Protection and Enhancement Act.

B. Industrial Surface Preparation ..... 35 Hours

Outcome: ***Relate industrial surface preparation knowledge to practical applications.***

1. Discuss corrosion of substrates.
2. Describe and demonstrate surface preparation using solvent and chemicals.
3. Describe and demonstrate surface preparation using hand and power tools.
4. Describe and demonstrate surface preparation using blast cleaning.
5. Demonstrate understanding of specifications and industry standards as they relate to surface preparation for industrial coatings.
6. Perform maintenance on surface preparation equipment.

C. Industrial Coatings ..... 25 Hours

Outcome: ***Outline the fundamentals of industrial coatings.***

1. Discuss proper methods for preparation, mixing, handling and storage of industrial coatings.
2. Describe chemical composition of industrial coatings.
3. Detail the physical characteristics and uses for industrial coatings.
4. Demonstrate understanding of specifications and industry standards as they relate to the preparation and mixing of industrial coatings.

D. Industrial Spraying ..... 25 Hours

Outcome: ***Operate and maintain electrostatic spray equipment and plural component spray equipment.***

1. Discuss the principles of viscosity control.
2. Describe the operation of electrostatic spray equipment.
3. Describe the operation of plural component spray system.
4. Identify the components of an electrostatic spray system.
5. Identify the components of a plural component spray system.
6. Outline maintenance requirements for an electrostatic spray system.

7. Outline maintenance requirements for a plural component spray system.
8. Perform start up and shut down procedures for an electrostatic spray system.
9. Perform start up and shut down procedures for a plural component spray system.
10. Demonstrate proper spraying technique for an electrostatic spray system.
11. Demonstrate proper spraying technique for a plural component spray system.
12. Perform maintenance and troubleshooting on an electrostatic spray system.
13. Perform maintenance and troubleshooting on a plural component spray system.

SECTION TWO: .....COMMERCIAL WALLCOVERING..... 28 HOURS

A. Advanced Wallcovering Theory ..... 8 Hours

Outcome: ***Discuss commercial wallcovering.***

1. Describe the properties of commercial wallcovering.
2. Describe the application procedures of commercial wallcovering to:
   a) feature walls
   b) panelled walls
   c) ceilings
   d) columns
   e) stairwells
   f) sloped surfaces
   g) circular walls

B. Advanced Wallcovering Procedures ..... 20 Hours

Outcome: ***Apply commercial wallcovering to complex shapes.***

1. Demonstrate the application procedure of commercial wallcovering to:
   a) feature walls
   b) panelled walls
   c) ceilings
   d) columns
   e) stairwells
   f) sloped surfaces
   g) circular walls

SECTION THREE: ..... SPECIALTY FINISHES..... 64 HOURS

A. Specialty Finishes Theory ..... 8 Hours

Outcome: ***Discuss specialty finishes.***

1. Describe the surface preparation requirements for specialty finishes.
2. List the tools used in applying specialty finishes.
3. Explain the process for completing specialty finishes, such as:
   a) antiquing
   b) wood graining
   c) marbling
   d) gilding

B. Specialty Finishes Applications ..... 18 Hours

Outcome: ***Relate specialty finishing theory to practical applications.***

1. Demonstrate specialty finishes, such as:
    a) antiquing
    b) wood graining
    c) marbling
    d) gilding

C. Colour Planning ..... 12 Hours

Outcome: ***Discuss the fundamentals of colour planning.***

1. Discuss the psychological effects of colour.
2. Compare the Munsell, Ostwald and MacDonald colour theories.
3. Design colour schemes using the MacDonald colour theory.

D. Advanced Wood Finishing Theory ..... 5 Hours

Outcome: ***Describe advanced wood finishing procedures.***

1. Describe procedures used to repair damaged wood surfaces.
2. Describe procedures used to refinish previously finished wood.
3. Discuss procedures used to obtain a specialty finish on a wood surface.

E. Advanced Wood Finishing Procedures ..... 21 Hours

Outcome: ***Create samples based on advanced wood finishing theory.***

1. Demonstrate surface preparation procedures for specialty wood finishes.
2. Demonstrate specialty finishing procedures, such as:
    a) glazing
    b) shading
    c) coloured lacquer
3. Demonstrate the repair of damaged wood surfaces.
4. Demonstrate the ability to refinish previously finished wood surfaces.

SECTION FOUR: ADVANCED CALCULATIONS AND FINAL PERIOD FUNDAMENTALS ..... 59 HOURS

A. Mathematics ..... 20 Hours

Outcome: ***Perform area calculations on vessels and structures commonly found in industry.***

1. Calculate the area of various sized vessels and structures.
2. Calculate the amount of coating material needed to complete various projects.
3. Calculate the amount of abrasive needed for surface preparation.

B. Blueprint Interpretation ..... 20 Hours

Outcome: ***Perform estimates based on blueprints and specifications.***

1. Estimate quantities of wallcovering and vinyl.

2. Estimate area based on blueprints.
3. Estimate coating materials based on blueprints.
4. Estimate production levels based on specific projects.
5. Identify details from blueprints.
6. Identify details from project specifications.
7. Correlate specifications with the blueprints.
8. Describe the linear relationship between blueprints, specifications and industrial and architectural standards.

C. Workplace Coaching Skills ..... 5 Hours

Outcome: ***Display coaching skills.***

1. Describe coaching skills used for training apprentices.

D. Advisory Network ..... 2 Hours

Outcome: ***Describe the advisory network.***

1. Explain the role and purpose of the advisory network, local apprenticeship committee's and provincial apprenticeship committee.

E. Interprovincial Standards ..... 12 Hours

Outcome: ***Discuss Red Seal / Interprovincial standards.***

1. Describe the National Occupational Analysis (NOA).
2. Describe the relationship between the NOA and Red Seal / Interprovincial examinations.
3. Discuss the roles of federal and provincial government in the development of Red Seal standards.
4. Discuss the role of industry in the development of Red Seal standards.
5. Explain the intent of the Red Seal examination as it relates to interprovincial mobility.
6. Describe sources of information on Red Seal standards and practice examinations.

Excellence through training and experience

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